

## CLAIMS

What I claim is:

1. A system for displaying aeronautical information, said system comprising:

a central processing unit;

a memory coupled to said central processing unit; and

a display screen coupled to said central processing unit,

said central processing unit being configured for executing the steps of:

1) receiving, from a user, a user-specified upper-threshold altitude;

2) receiving altitude-related information regarding one or more targets;

3) using said altitude-related information to identify one or more targets that have an altitude that is greater than said user-specified upper-threshold altitude;

and

4) withholding from display on said display screen one or more of said one or more targets identified in said Step 3.

2. The system of Claim 1, wherein said central processing unit is further configured for replacing a current upper-threshold altitude with said user-specified upper-threshold altitude.

3. The system of Claim 1, wherein said central processing unit is further configured for:

5) using said altitude-related information to identify one or more targets that have an altitude that is less than a current lower-threshold altitude; and

6) withholding from display on said display screen one or more of said one or more targets identified in said Step 5.

4. The system of Claim 3, wherein said current lower-threshold altitude has been specified by a user, and said central processing unit is further configured for receiving, from a user, said current lower-threshold altitude.

5. The system of Claim 3, wherein said current lower-threshold altitude is pre-defined, and is substantially not user-modifiable.

6. The system of Claim 3, wherein said central processing unit is further configured for displaying on said display screen any targets that are detected by said system and that have an altitude that is both greater than said current lower-threshold altitude and less than said user-specified upper-threshold altitude.

7. The system of Claim 3, wherein said central processing unit is further configured for, in response to an Own Ship landing, resetting said current lower-threshold altitude to a pre-defined default lower-threshold altitude.

8. The system of Claim 1, wherein said central processing unit is further configured for:

receiving an exempt target designation identifying at least one exempt target that is not to be withheld from display on said display screen based on a relationship between said user-specified upper-threshold altitude and an altitude of said exempt target; and

in response to said exempt target being detected by said system, displaying said exempt target on said display screen regardless of whether an altitude of said exempt target is greater than, less than, or equal to said user-specified upper-threshold altitude.

9. The system of Claim 1, wherein said user-specified upper-threshold altitude is defined relative to an altitude of an “Own Ship” aircraft.

10. The system of Claim 1, wherein said user-specified upper-threshold altitude is defined relative to the ground over which an “Own Ship” aircraft is positioned.

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11. The system of Claim 1, wherein said central processing unit is further configured for displaying said user-specified upper-threshold altitude on said display screen.

12. The system of Claim 11, wherein said central processing unit is further configured for displaying a lower-threshold altitude on said display screen.

13. The system of Claim 12, wherein said central processing unit is further configured for displaying a current filtering mode on said display screen.

14. The system of Claim 13, wherein said current filtering mode is selected from a group consisting of: look-up mode, look-down mode, and look level mode.

15. The system of Claim 2, wherein said central processing unit is further configured for, in response to an Own Ship landing, resetting said user-specified upper-threshold altitude to a pre-defined default upper-threshold altitude.

16. The system of Claim 1, wherein:

said central processing unit is further configured for operation in both a first filtering mode and a second filtering mode; and

said user-specified upper threshold altitude is a first upper-threshold altitude; and

wherein said central processing unit is configured for:

in response to said central processing unit operating in said first filtering mode:

executing said Step 3 of using said altitude-related information to identify one or more targets that have an altitude that is greater than said user-specified upper-threshold altitude, and

executing said Step 4 of withholding from display on said display screen one or more of said one or more targets identified in said Step 3; and

in response to said central processing unit operating in said second filtering mode:

5) using said altitude-related information to identify one or more targets that have an altitude that is greater than a second upper-threshold altitude, and

6) withholding from display on said display screen one or more of said one or more targets identified in said Step 5.

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17. The system of Claim 16, wherein said central processing unit is further configured for, in response to an Own Ship landing, reconfiguring said system so that said central processing unit is configured for:

in response to said central processing unit operating in said first filtering mode:

7) using said altitude-related information to identify one or more targets that have an altitude that is greater than a first, pre-defined default upper-threshold altitude, and

8) withholding from display on said display screen one or more of said one or more targets identified in said Step 7.

in response to said central processing unit operating in said second filtering mode:

9) using said altitude-related information to identify one or more targets that have an altitude that is greater than a second, pre-defined default upper-threshold altitude, and

10) withholding from display on said display screen one or more of said one or more targets identified in said Step 9.

FOOTNOTES

18. A system for displaying aeronautical information, said system comprising:

a central processing unit;

a memory coupled to said central processing unit; and

a display screen coupled to said central processing unit,

said central processing unit being configured for executing the steps of:

1) receiving, from a user, a user-specified lower-threshold altitude;

2) receiving altitude-related information regarding one or more targets;

3) using said altitude-related information to identify one or more targets that have an altitude that is less than said user-specified lower-threshold altitude;

and

4) withholding from display on said display screen one or more of said one or more targets identified in said Step 3.

19. The system of Claim 18, wherein said central processing unit is further configured for replacing a current lower-threshold altitude with said user-specified lower-threshold altitude.

20. The system of Claim 18, wherein said central processing unit is further configured for:

5) using said altitude-related information to identify one or more targets that have an altitude that is greater than a current upper-threshold altitude; and

6) withholding from display on said display screen one or more of said one or more targets identified in said Step 5.

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21. The system of Claim 20, wherein said current upper-threshold altitude has been specified by a user, and said central processing unit is further configured for receiving, from a user, said current upper-threshold altitude.

22. The system of Claim 20, wherein said current upper-threshold altitude is pre-defined, and is substantially not user-modifiable.

23. The system of Claim 20, wherein said central processing unit is further configured for displaying on said display screen any targets that are detected by said system and that have an altitude that is both greater than said user-specified lower-threshold altitude and less than said current upper-threshold altitude.

24. The system of Claim 20, wherein said central processing unit is further configured for, in response to an Own Ship landing, resetting said current upper-threshold altitude to a pre-defined default upper-threshold altitude.

25. The system of Claim 18, wherein said central processing unit is further configured for:

receiving an exempt target designation identifying at least one exempt target that is not to be withheld from display on said display screen based on a relationship between said user-specified lower-threshold altitude and an altitude of said exempt target; and

in response to said exempt target being detected by said system, displaying said exempt target on said display screen regardless of whether an altitude of said exempt target is greater than, less than, or equal to said user-specified lower-threshold altitude.

26. The system of Claim 18, wherein said user-specified lower-threshold altitude is defined relative to an altitude of an “Own Ship” aircraft.

27. The system of Claim 18, wherein said user-specified lower-threshold altitude is defined relative to the ground over which an "Own Ship" aircraft is positioned.

28. The system of Claim 19, wherein said central processing unit is further configured for, in response to an Own Ship landing, resetting said user-specified lower-threshold altitude to a pre-defined default lower-threshold altitude.

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29. The system of Claim 18, wherein:

said central processing unit is further configured for operation in both a first filtering mode and a second filtering mode; and

said user-specified lower threshold altitude is a first lower-threshold altitude; and

wherein said central processing unit is configured for:

in response to said central processing unit operating in said first filtering mode:

executing said Step 3 of using said altitude-related information to identify one or more targets that have an altitude that is less than said user-specified lower-threshold altitude, and

executing said Step 4 of withholding from display on said display screen one or more of said one or more targets identified in said Step 3; and

in response to said central processing unit operating in said second filtering mode:

5) using said altitude-related information to identify one or more targets that have an altitude that is less than a second lower-threshold altitude, and



- 6) withholding from display on said display screen  
one or more of said one or more targets identified in said  
Step 5.

30. The system of Claim 29, wherein said central processing unit is further configured for, in response to an Own Ship landing, reconfiguring said system so that said central processing unit is configured for:

in response to said central processing unit operating in said first filtering mode:

7) using said altitude-related information to identify one or more targets that have an altitude that is less than a first, pre-defined default lower-threshold altitude, and

8) withholding from display on said display screen one or more of said one or more targets identified in said Step 7.

in response to said central processing unit operating in said second filtering mode:

9) using said altitude-related information to identify one or more targets that have an altitude that is less than a second, pre-defined default lower-threshold altitude, and



31. A computer-readable medium comprising computer-executable instructions for performing the steps of:

- 1) receiving, from a user, a user-specified upper-threshold altitude;
  - 2) receiving altitude-related information regarding one or more targets;
  - 3) using said altitude-related information to identify one or more targets that have an altitude that is greater than said user-specified upper-threshold altitude;
- and
- 4) withholding from display on a display screen one or more of said one or more targets identified in said Step 3.

32. The computer-readable medium of Claim 31, wherein said computer-readable medium further comprises computer-executable instructions for replacing a current upper-threshold altitude with said user-specified upper-threshold altitude.

33. The computer-readable medium of Claim 31, wherein said computer-readable medium further comprises computer-executable instructions for:

5) using said altitude-related information to identify one or more targets that have an altitude that is less than a current lower-threshold altitude; and

6) withholding from display on said display screen one or more of said one or more targets identified in said Step 5.

34. The computer-readable medium of Claim 33, wherein said current lower-threshold altitude has been specified by a user, and wherein said computer-readable medium further comprises computer-executable instructions for receiving, from a user, said current lower-threshold altitude.

35. The computer-readable medium of Claim 33, wherein said current lower-threshold altitude is pre-defined, and is substantially not user-modifiable.

36. The computer-readable medium of Claim 33, wherein said computer-readable medium further comprises computer-executable instructions for displaying on a display screen any targets detected by a surveillance system that have an altitude that is both greater than said current lower-threshold altitude and less than said user-specified upper-threshold altitude.

37. The computer-readable medium of Claim 33, wherein said computer-readable medium further comprises computer-executable instructions for, in response to an Own Ship landing, resetting said current lower-threshold altitude to a pre-defined default lower-threshold altitude.

TEST OF "SECRET"

38. The computer-readable medium of Claim 31, wherein said computer-readable medium further comprises computer-executable instructions for:

receiving an exempt target designation identifying at least one exempt target that is not to be withheld from display on said display screen based on a relationship between said user-specified upper-threshold altitude and an altitude of said exempt target; and

in response to said exempt target being detected by a surveillance system, displaying said exempt target on said display screen regardless of whether an altitude of said exempt target is greater than, less than, or equal to said user-specified upper-threshold altitude.

39. The computer-readable medium of Claim 32, wherein said computer-readable medium further comprises computer-executable instructions for, in response to an Own Ship landing, resetting said current upper-threshold altitude to a pre-defined default upper-threshold altitude.

40. The computer-readable medium of Claim 31, wherein said user-specified upper threshold altitude is a first upper threshold altitude; and

wherein said computer-readable medium further comprises computer-executable instructions for:

allowing a user to select between a first filtering mode and a second filtering mode;

in response to said user selecting said first filtering mode:

executing said Step 3 of using said altitude-related information to identify one or more targets that have an altitude that is greater than said user-specified upper-threshold altitude, and

executing said Step 4 of withholding from display on said display screen one or more of said one or more targets identified in said Step 3; and

in response to said user selecting said second filtering mode:

FOOTNOTES





41. The computer-readable medium of Claim 40, wherein said computer-readable medium further comprises computer-executable instructions for, in response to an Own Ship landing, modifying one or more current upper-threshold altitudes so that said computer-executable instructions are operational for:

in response to said user selecting a first filtering mode:

7) using said altitude-related information to identify one or more targets that have an altitude that is greater than a first, pre-defined default upper-threshold altitude, and

8) withholding from display on said display screen one or more of said one or more targets identified in said Step 7, and

in response to said user selecting a second filtering mode:

9) using said altitude-related information to identify one or more targets that have an altitude that is greater than a second, pre-defined default upper-threshold altitude, and

10) withholding from display on said display screen one or more of said one or more targets identified in said Step 9.

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42. A computer-readable medium comprising computer-executable instructions for performing the steps of:

- 1) receiving, from a user, a user-specified lower-threshold altitude;
- 2) receiving altitude-related information regarding one or more targets;
- 3) using said altitude-related information to identify one or more targets that have an altitude that is less than said user-specified lower-threshold altitude; and
- 4) withholding from display on a display screen one or more of said one or more targets identified in said Step 3.

43. The computer-readable medium of Claim 42, wherein said computer-readable medium further comprises computer-executable instructions for replacing a current lower-threshold altitude with said user-specified lower-threshold altitude.

44. The computer-readable medium of Claim 42, wherein said computer-readable medium further comprises computer-executable instructions for:

5) using said altitude-related information to identify one or more targets that have an altitude that is greater than a current upper-threshold altitude; and

6) withholding from display on said display screen one or more of said one or more targets identified in said Step 5.

45. The computer-readable medium of Claim 44, wherein said current upper-threshold altitude has been specified by a user, and wherein said computer-readable medium further comprises computer-executable instructions for receiving, from a user, said current upper-threshold altitude.

46. The computer-readable medium of Claim 44, wherein said current upper-threshold altitude is pre-defined, and is substantially not user-modifiable.

47. The computer-readable medium of Claim 44, wherein said computer-readable medium further comprises computer-executable instructions for displaying on said display screen any targets that are detected by said computer-readable medium that have an altitude that is both greater than said user-specified lower-threshold altitude and less than said current upper-threshold altitude.

48. The computer-readable medium of Claim 44, wherein said computer-readable medium further comprises computer-executable instructions for, in response to an Own Ship landing, resetting said current upper-threshold altitude to a pre-defined default upper-threshold altitude.

49. The computer-readable medium of Claim 42, wherein said computer-readable medium further comprises computer-executable instructions for:

receiving an exempt target designation identifying at least one exempt target that is not to be withheld from display on said display screen based on a relationship between said user-specified lower-threshold altitude and an altitude of said exempt target; and

in response to said exempt target being detected by a surveillance system, displaying said exempt target on said display screen regardless of whether an altitude of said exempt target is greater than, less than, or equal to said user-specified lower-threshold altitude.

50. The computer-readable medium of Claim 43, wherein said computer-readable medium further comprises computer-executable instructions for, in response to an Own Ship landing, resetting said current lower-threshold altitude to a pre-defined default lower-threshold altitude.

51. The computer-readable medium of Claim 42, wherein  
said user-specified lower threshold altitude is a first user-specified  
lower threshold altitude; and

wherein said computer-readable medium further comprises  
computer-executable instructions for:

allowing a user to select between a first filtering mode and a second filtering mode;

in response to said user selecting said first filtering mode:

executing said Step 3 of using said altitude-related information to identify one or more targets that have an altitude that is less than said user-specified lower-threshold altitude, and

executing said Step 4 of withholding from display on said display screen one or more of said one or more targets identified in said Step 3; and

in response to said user selecting said second filtering mode:





52. The computer-readable medium of Claim 51, wherein said computer-readable medium further comprises computer-executable instructions for, in response to an Own Ship landing, modifying one or more current lower-threshold altitudes so that:

in response to said user selecting said first filtering mode, said computer executable instructions are configured to:

7) use said altitude-related information to identify one or more targets that have an altitude that is less than a first, pre-defined default lower-threshold altitude, and

8) withhold from display on said display screen one or more of said one or more targets identified in said Step 7;

in response to said user selecting said second filtering mode, said computer executable instructions are configured to:

9) use said altitude-related information to identify one or more targets that have an altitude that is less than a second, pre-defined default lower-threshold altitude, and



53. A method of displaying information on a display screen, said method comprising the steps of:

- 1) receiving, from a user, a user-specified upper-threshold altitude;
- 2) receiving altitude-related information regarding one or more targets;
- 3) using said altitude-related information to identify one or more targets that have an altitude that is greater than said user-specified upper-threshold altitude;
- and
- 4) withholding from display on a display screen one or more of said one or more targets identified in said Step 3.

54. The method of Claim 53, wherein said method further comprises the step of replacing a current upper-threshold altitude with said user-specified upper-threshold altitude.

55. The method of Claim 53, wherein said method further comprises the steps of:

5) using said altitude-related information to identify one or more targets that have an altitude that is less than a current lower-threshold altitude; and

6) withholding from display on said display screen one or more of said one or more targets identified in said Step 5.

56. The method of Claim 55, wherein said current lower-threshold altitude has been specified by a user, and wherein said method further comprises the step of receiving, from a user, said current lower-threshold altitude.

57. The method of Claim 55, wherein said current lower-threshold altitude is pre-defined, and is substantially not user-modifiable.

58. The method of Claim 55, wherein said method further comprises the step of displaying on said display screen any targets that are detected by a surveillance system and that have an altitude that is both greater than said current lower-threshold altitude and less than said user-specified upper-threshold altitude.

59. The method of Claim 55, wherein said method further comprises the step of, in response to an Own Ship landing, resetting said current lower-threshold altitude to a pre-defined default lower-threshold altitude.

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60. The method of Claim 53, wherein said method further comprises the steps of:

receiving an exempt target designation identifying at least one exempt target that is not to be withheld from display on said display screen based on a relationship between said user-specified upper-threshold altitude and an altitude of said exempt target; and

in response to said exempt target being detected by a surveillance system, displaying said exempt target on said display screen regardless of whether an altitude of said exempt target is greater than, less than, or equal to said user-specified upper-threshold altitude.

61. The method of Claim 54, wherein said method further comprises the step of, in response to an Own Ship landing, resetting said user-specified upper-threshold altitude to a pre-defined default upper-threshold altitude.

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62. A method of displaying information on a display screen, said method comprising the steps of:

- 1) receiving, from a user, a user-specified lower-threshold altitude;
- 2) receiving altitude-related information regarding one or more targets;
- 3) using said altitude-related information to identify one or more targets that have an altitude that is less than said user-specified lower-threshold altitude;
- and
- 4) withholding from display on a display screen one or more of said one or more targets identified in said Step 3.

63. The computer-readable medium of Claim 62, wherein said method further comprises the step of replacing a current lower-threshold altitude with said user-specified lower-threshold altitude.

64. The method of Claim 62, wherein said method further comprises the steps of:

5) using said altitude-related information to identify one or more targets that have an altitude that is greater than a current upper-threshold altitude; and

6) withholding from display on said display screen one or more of said one or more targets identified in said Step 5.

65. The method of Claim 64, wherein said current upper-threshold altitude has been specified by a user, and wherein said method further comprises the step of receiving, from a user, said current upper-threshold altitude.

66. The method of Claim 64, wherein said current upper-threshold altitude is pre-defined, and is substantially not user-modifiable.

67. The method of Claim 64, wherein said method further comprises the step of displaying on said display screen any targets that are detected by a surveillance system that have an altitude that is both greater than said user-specified lower-threshold altitude and less than said current upper-threshold altitude.

68. The method of Claim 64, wherein said method further comprises the step of, in response to an Own Ship landing, resetting said current upper-threshold altitude to a pre-defined default upper-threshold altitude.

FIG. 6B

69. The method of Claim 62, wherein said method further comprises the steps of:

receiving an exempt target designation identifying at least one exempt target that is not to be withheld from display on said display screen based on a relationship between said user-specified lower-threshold altitude and an altitude of said exempt target; and

in response to said exempt target being detected by a surveillance system, displaying said exempt target on said display screen regardless of whether an altitude of said exempt target is greater than, less than, or equal to said user-specified lower-threshold altitude.



71. A computer-readable medium comprising computer-executable instructions for performing the steps of:

- 1) receiving an upper-threshold altitude;
- 2) identifying one or more targets that have an altitude that is greater than said upper-threshold altitude;
- 3) receiving an exempt target designation identifying at least one exempt target that is not to be withheld from display on a display screen based on a relationship between said user-specified upper-threshold altitude and an altitude of said exempt target;
- 4) withholding from display on said display screen one or more of said targets identified in said Step 2; and
- 5) in response to said at least one exempt target being detected by a surveillance system, displaying said at least one exempt target on said display screen regardless of whether an altitude of said at least one exempt target is greater than, less than, or equal to said upper-threshold altitude.

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73. A computer-readable medium comprising computer-executable instructions for performing the steps of:

- 1) receiving a lower-threshold altitude;
- 2) identifying one or more targets that have an altitude that is less than said lower-threshold altitude;
- 3) receiving an exempt target designation identifying at least one exempt target that is not to be withheld from display on a display screen based on a relationship between said lower-threshold altitude and an altitude of said at least one exempt target;
- 4) withholding from display on a display screen one or more of said targets identified in said Step 2; and
- 5) in response to said at least one exempt target being detected by a surveillance system, displaying said at least one exempt target on said display screen regardless of whether an altitude of said at least one exempt target is greater than, less than, or equal to said lower-threshold altitude.



74. The computer-readable medium of Claim 73, wherein said exempt target designation has been made automatically based on one or more flight characteristics of said at least one exempt target.

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75. A computer-readable medium comprising computer executable instructions for performing the steps of:

- 1) receiving an upper-threshold altitude;
- 2) identifying one or more targets that have an altitude that is greater than said upper-threshold altitude;
- 3) withholding from display on a display screen one or more of said targets identified in said Step 2; and
- 4) in response to an Own Ship landing, resetting said upper-threshold altitude to a pre-defined default upper-threshold altitude.

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76. A computer-readable medium comprising computer-executable instructions for performing the steps of:

- 1) receiving a lower-threshold altitude;
- 2) identifying one or more targets that have an altitude that is less than said lower-threshold altitude;
- 3) withholding from display on a display screen one or more of said targets identified in said Step 2; and
- 4) in response to an Own Ship landing, resetting said lower-threshold altitude to a pre-defined default lower-threshold altitude.

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77. A computer-readable medium comprising computer-executable instructions for performing the steps of:

receiving information that indicates a current operating mode;

receiving information regarding an altitude of one or more targets;

in response to said current operating mode corresponding to a first operating mode, executing the steps of:

A) using said information regarding an altitude of one or more targets to identify one or more targets having an altitude greater than a first upper-threshold altitude, and

B) withholding from display on a display screen one or more of said targets identified in said Step A,

in response to said current operating mode corresponding to a second operating mode, executing the steps of:

C) using said information regarding an altitude of one or more targets to identify one or more targets

having an altitude greater than a second upper-threshold altitude, and

D) withholding from display on a display screen one or more of said targets identified said in said Step C,

in response to an Own Ship landing, resetting said first upper-threshold altitude to a pre-defined first default upper-threshold altitude; and

in response to an Own Ship landing, resetting said second upper-threshold altitude to a pre-defined second default upper-threshold altitude.

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78. A computer-readable medium comprising computer-executable instructions for performing the steps of:

receiving information that indicates a current operating mode;

receiving information regarding an altitude of one or more targets;

in response to said current operating mode corresponding to a first operating mode, executing the steps of:

A) using said information regarding an altitude of one or more targets to identify one or more targets having an altitude less than a first lower-threshold altitude, and

B) withholding from display on a display screen one or more of said targets identified in said Step A,

in response to said current operating mode corresponding to a second operating mode, executing the steps of:

C) using said information regarding an altitude of one or more targets to identify one or more targets having an altitude less than a second lower-threshold altitude, and

D) withholding from display on a display screen one or more of said targets identified in said Step C,

in response to an Own Ship landing, resetting said first lower-threshold altitude to a pre-defined first default lower-threshold altitude; and

in response to an Own Ship landing, resetting said second lower-threshold altitude to a pre-defined second default lower-threshold altitude.